Florida Department of Transportation

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2014 Highway Safety Matrix

Purpose: The county and city matrices were designed to provide FDOT traffic safety planners an objective, data-driven tool to rank traffic safety projects. Both counties and cities are divided into three population groups. The numbers in each matrix represent where counties or cities rank within their population group in a particular program area, with "1" representing the worst crash rate, as described below. For example, the "12" next to Marion indicates they are ranked 12th in alcohol-related crashes among the 23 counties in Group 1.

Note that despite the reduction in fatal and injury crashes occurring over the past several years, the range of numbers appearing in the matrix does not change, because counties and cities are being compared to each other on a relative basis.

Measures used: The rankings in both matrices are based on rates of fatalities plus injuries over one, three, and five-year periods, in this case FY2014 rankings reflect 2008-2012 data. In the County Matrix rates are 50% per population and 50% per vehicle mile traveled, with the exception of the Bicycle and Pedestrian areas, which are 100% per population. For the City Matrix, all rates are per population. Inmate populations are excluded in the calculations.

Specific measures for each column in the matrix are as follows:

- **Total Fatalities and Injuries (F&I)** – overall fatalities plus injuries
- **Alcohol Related** – alcohol-related fatalities plus injuries (this includes both Driving Under Influence and crashes where had been drinking was a contributing circumstance)
- **Bicycle, Motorcycle, Pedestrian** F&I – bicyclist, motorcyclist, and pedestrian fatalities plus injuries
- **Speed Related** – speed-related fatalities plus injuries
- **Safety Equipment** – injuries plus fatalities among drivers and passengers who were both not using safety equipment and were subject to the seat belt law
- **Aggressive Driving** – injuries plus fatalities in crashes where two or more of certain moving violations (includes careless driving, improper passing, and several others) were cited
- **Teen Drivers** – injuries plus fatalities among drivers aged 15-19, excluding bicyclists and motorcyclists
- **Older Drivers** – injuries plus fatalities among drivers aged 65+, excluding bicyclists and motorcyclist.

Alcohol, speeding, and aggressive driving are treated as causal factors, so that all injuries and fatalities in crashes involving them are counted. On the other hand, only bicycle, motorcycle, and pedestrian victims, drivers 15-19 or 65+, plus individuals not using seat belts are counted in their respective areas.

Data Sources – The Florida *DHSMV Traffic Crash Statistics Report* was used as the data source in the county matrix for the Total F&I, Alcohol Related, and the Bicycle, Motorcycle, and Pedestrian F&I areas. DOT's CAR database was used in the Speed Related, Safety Equipment, Teen Drivers, Drivers 65+, and Aggressive Driving areas, as well as the source for all data used in compiling city crash data.

Subjectivity of crash data used: It is important to realize that some of the measures cited above are more subjective than others. Total F&I, the Bicycle, Motorcycle, and Pedestrian F&I areas, Teen Drivers, and Drivers 65+ are relatively objective, as they are only based on crash victims. The other areas are all dependent on how thorough investigating officers are in documenting crash circumstances. It is quite likely there are differences among jurisdictions in this regard.

Other data limitations: County rankings are based on crashes occurring both inside and outside cities and municipalities and may involve different investigating agencies, including the Florida Highway Patrol, which does much of the enforcement in rural areas.

City crashes are much more subject to errors involving location. In some instances, crash investigators either are unaware of their exact location or write down the wrong DHSMV city code. The DOT Safety Office's Crash Records section identifies many of the location errors made on state roads. These corrections are reflected in crashes in the CAR database, but many errors still remain.